Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

No claims have been canceled, and claim 39 has been added. Claims 2 and 13 have been amended to correct the informalities cited in item 1 of the Office Action. Consequently, claims 1-39 are currently pending and under consideration.

The Applicants first wish to thank Examiner Silbermann for the telephonic interview of June 15, 2004 concerning the above-identified application. At the interview a draft amendment similar to this one was presented along with a proposed claim amendment. It should be noted that new claim 39 corresponds to the proposed claim from the interview. At the interview, the proposed amendment was discussed in view of the cited references, in particular U.S. Patent No. 6,078,424 to Morton. The substantive remarks presented at the interview have been again provided below.

The following discussion has been provided to provide some background information for the discussion below. As should be appreciated from reviewing the present application, the invention described therein generally concerns a technique and system in which the movement of a lenticular display is controlled only by drive signals generated from audio message sound signals. By allowing the audio message to generate the drive signals for moving the display, apparent synchronization can be achieved between movement on the display and the audio message. As the drive signals are generated from the audio message, the animated movement sequence of the display can be repeated as often as required to ensure synchronization for the duration of the audio message. The display need not be provided with a movement sequence in a form that matches the length of the audio message, because the drive signal is provided by the audio message, and the display is simply moved in response to the drive signal at each instant. As a result, the movement sequence on the display does not need to have the same length as the audio message. This allows the display to be

made more inexpensively and also means that the length of the movement sequence on the display does not limit the length of audio message that can be used. This is especially useful in novelty devices where cost is always a concern. In particular, as the drive signals are generated from the audio message, the animated movement sequence of the display can be repeated as often as required to ensure synchronization for the duration of the audio message. Synchronization is therefore achieved at all times as movement of the display only occurs in response to a drive signal from the audio message.

In item 3 of the Office Action, independent claim 1 was "rejected under 35 U.S.C. 102 (b) as being anticipated by Morton , US #6,078,424." It is well settled law that a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). See, Manual of Patent Examining Procedure (MPEP) §2131. It is not sufficient that the prior art reference disclose all of the elements in isolation. Rather, "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinefabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984, emphasis added). The Examiner has the burden of presenting a prima facie case of anticipation. In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986); In re Skinner, 2 USPQ2d 1788, 1788-89 (B.P.A.I. 1986). In the present application, it is submitted that the Examiner has failed to meet this burden to establish a prima facie case of anticipation.

For example, Morton fails to disclose "deriving a drive signal from said sound signal either in real time or prior to delivery of said sound signal to said sound generating means and delivering said drive signal to said drive mechanism to cause

movement of said lenticular image" as recited in claim 1. In Morton, the drive signals to control the movement of the visual display are not generated as a result of the audio message, but instead the movement of the display activates the audio reproduction device 80, which is the reverse of the recited invention. It is quite clear from reading Morton in column 7, lines 36-52 that the motor 76, via shaft 74, is used to drive a cam 72, which in turn causes the movement of the display over a given time, and it is the cam 72 that controls the movement of the display. As depicted in FIG. 8 of Morton, a shaft encoder assembly 78 generates signals indicative of the movement of the cam 72 that moves the image bearing member 14 relative to the screen 10. In turn, this movement of the cam 72 causes the generation of signals indicative of the movement of the shaft 74 to ensure that synchronization is achieved with the audio reproduction device 80. "The signal generated by the shaft encoder 78 is sent to an audio reproduction device 80 shown in FIG. 9, which begins audio reproduction in accordance with one of the methods described above." Morton, col. 7, lines 42-45 (emphasis added). It should be appreciated that the movement of visual display in Morton causes the audio message to start at the same time, via the shaft encoder assembly 78. Morton further suggests using separate timing signals from the audio unit 80 "to ensure that the sound remains synchronized with the motion once the movement has started." Morton col. 7 lines 54-56. However, Morton is unclear how the timing signals are actually implemented, which creates a question of what Morton actually enables in regards to the timing signal. From reading Morton in its entirety, it appears that the movement of the visual display in Morton does not depend on the generation of these timing signals, but rather, these timing signals are generated during the operation of the display to check for synchronization between the display and the audio unit 80, after the display is moving. It is therefore only the technique described in the current application, which allows the generation of drive signals from the audio message to fully control the movement of the display.

As another example, Morton further fails to disclose "wherein the animation sequence viewable during the motion of the lenticular image is repeated a number of

times and for varying periods of time determined by the drive signal during the time that the single sound sample is reproduced by the sound generating means to give the appearance that the animation sequence is of the same duration as the sound sample and that said animation sequence is synchronised with the sound sample" as recited in claim 1. Specifically, Morton does not, contrary to the Office Action's assertion, disclose the repeat movement sequence of the display when used in conjunction with an audio message. It is only in the current application that there is disclosed the provision of a visual display movement sequence which is repeated and in synchronization during the playing of an audio message so that the movement sequence does not need to be the same length as the audio message. As discussed on page 16 of the present application, the combination of synchronized motion and sound that is provided by this repeated movement allows the synchronization to be realistically and inexpensively be reproduced. This allows the display to be made more inexpensively and also means that the length of movement sequence which can be achieved does not act as a limitation on the length of audio message which can be provided. This renders the invention practically and commercially implementable, especially for novelty devices where cost is a concern. For this and other reasons, it is submitted that independent claim 1 and its dependent claims are allowable over the references of record.

In item 7 of the Office Action, dependent "[c]laims 3-13 were rejected under 35 U.S.C. 103(a) as being unpantentable over Morton." In addition for reasons given above for the allowability of independent claim 1, additional reasons support the allowance of the claims that depend from claim 1.

For example, as discussed at the interview, "wherein the initial image viewable in the animation sequence is that of the face of a character or person having their mouth closed, the animation sequence showing that character or person subsequently opening and then closing their mouth" feature recited in claim 4 is not a "matter of design choice", but rather a feature of the claimed in invention. It seems that impermissible hindsight is being used to arrive at the invention recited in claim 4. As

mentioned at the interview, by repeatedly opening and closing the mouth in the manner as recited in claim 4, a realistic and inexpensive technique for simulating speech is provided.

Using claim 6 as another example, contrary to the Office Action, Morton fails to disclose or suggest "wherein the drive signal is derived such that the animation sequence is repeated for each syllable of speech reproduced by the sound generating means." As discussed starting in the last paragraph on page 16 of the present application, "[a] further surprising feature of the invention is that the realism with which synchronisation of sound to animation is achieved is actually dependent on an idiosyncracy of human perception . . . realism of the synchronisation is enhanced by ensuring that the animation sequence is repeated and maintained for each syllable of speech in the sound sample, whereas in reality, a person's mouth will not actually close during pronunciation of certain words." In item 9 of the Office Action, it was admitted that "Morton does not specifically describe the motion of the image repeating for each syllable," but it was alleged that "this is to be an inherent feature, since Morton teaches synchronization between the image and sound." However, there is no inherent disclosure of such missing feature. For an element to be inherently disclosed, it must "necessarily be present in the thing described in the reference." In re Robertson, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Indeed, inherency "may not be established by probabilities or possibilities . . .The mere fact that a certain thing may result from a given set of circumstances is not sufficient." 49 USPQ2d at 1951. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 464 (USPTO Bd. of Pat. App. and Interferences 1990) (emphasis in the original). However, "the fact that a characteristic is a necessary feature or result of a prior-art embodiment (that is itself sufficiently described and enabled) is enough for inherent anticipation, even if that fact was unknown at the time of the prior invention." Toro Co. v. Deere & Co., 69 USPQ2d

1584, 1590 (Fed. Cir. 2004). Even assuming for arguments sake that the device in Morton could perform in such a manner, such is still not a necessary consequence of Morton's disclosure. For instance, it is conceivable that the display in Morton would only show speech in a manner as is captured on a video, that is the displayed mouth would not move for every syllable in a word, such as for the word "actually". Thus, the features recited in claim 6 are not necessarily present in Morton, and consequently, would not be inherent in Morton. Likewise, it should be appreciated from the above discussion that Morton fails to expressly or inherently disclose "wherein the duration of each repetition of the animation sequence which is determined by the drive signal varies between each repetition depending on the length of each syllable of speech contained in the sound sample" as recited in claim 7.

Referring to another example, Morton fails to disclose or suggest "wherein the lenticular image is caused to move gradually at the beginning and end of the animation sequence by means of a drive signal which is ramped at both the beginning and end of each peak" as recited in claim 8. Page 8, lines 11-21 of the present application describe "the drive signal is ramped at both the beginning and end of each peak to cause the gradual as opposed to stepwise motion of the lenticular image to give the impression that the mouth of the character or person seen in the animation sequence opens and closes gradually . . . [this] prevent[s] the binary type motion of the lenticular image or an element thereof which would result in a jerky and stilted animation sequence." Nowhere does Morton disclose such a feature or provide any motivation to ramp a drive signal in the manner as recited. For similar reasons, it should be appreciated that Morton fails to disclose or suggest "wherein the lenticular image is caused to move gradually at the beginning and end of the animation sequence by means of suitably damping the drive mechanism so that the delivery of a stepwise-type drive signal to the drive mechanism results in the gradual motion of the lenticular image" as recited in claim 9.

With respect to claim 10, Morton fails to disclose or suggest "wherein the peaks in the drive signal are maintained for a suitable time depending on the duration

of a particular syllable in the speech which constitutes the sound sample." As should be appreciated, such a feature allows realistic speech to be reproduced inexpensively, and Morton fails to even mention reproducing speech in any manner.

Based on the previous discussion, it should be appreciated that Morton fails to disclose or provided any motivation for "analysing said sound signal for characteristic peaks indicative of syllabic enunciation in speech" as recited in claim 10. Furthermore, Morton fails to disclose or suggest a technique in "which the processor creates a drive signal based on an algorithm which detects when the peaks in one or more of the characteristics of the input sound signal exceed a predetermined level" as recited in claim 11. It should be further appreciated from the previous discussion of Morton that Morton does not disclose or even provide motivation for a technique in "which the processor creates a drive signal based on an algorithm which detects when the peaks in one or more of the characteristics of the input sound signal exceed a predetermined level" as recited in claim 12. Morton fails to mention creating a drive signal based on the peaks of a sound signal.

In item 3, independent claim 14 was "rejected under 35 U.S.C. 102 (b) as being anticipated by Morton, US #6,078,424." In traversal, it is submitted that Morton fails to disclose all of the features recited in claim 14. For instance, Morton fails to disclose "said lenticular image being displaced by a drive mechanism actuated in response to a drive signal to allow an observer to see the animation sequence, said drive signal being derived manually or electronically from said sound signal in real time or prior to the delivery of said sound signal to the sound generation means" as recited in claim 14. As discussed above, the movement of the visual display in Morton is not generated as a result of the audio message, but instead the movement of the display activates the audio reproduction device 80, which is the reverse of the recited feature. Moreover, Morton fails to disclose "wherein in that the animation sequence viewable during the motion of the lenticular image is repeated a number of times and for varying periods of time determined by the drive signal during the time that the single sound sample is reproduced by the sound generating means to give the

appearance that the animation sequence is of the same duration as the sound sample and that said animation sequence is synchronised with the sound sample" as recited in claim 14. As previously mentioned, Morton does not disclose the repeat movement sequence of the display when used in conjunction with an audio message. For this and other reasons, it is submitted that independent claim 14 and its dependent claims are allowable over the references of record.

New independent claim 39 was presented at the interview, and based on the discussion, it is believed that it was agreed that Morton fails to anticipate claim 39. Moreover, it is submitted that claim 39 is nonobvious in view of Morton either alone or in combination with the other cited references. For instance, Morton fails to disclose or even suggest "wherein the duration of each repetition of the animation sequence is dependent upon the frequency of movement determined by the drive signals which are generated during each particular repetition and the length of each said repetition varies between successive repetitions during the playback of the sound sample" as recited in claim 39. As mentioned before, the combination of synchronized motion and sound that is provided by this repeated movement allows the synchronization to be realistically and inexpensively be reproduced (see, page 16 of the present application). Moreover, by varying the length of the repetitions the sound and animation is able to be synchronized in a realistic manner, without the animation being limited in duration by the length of the sound reproduction. Nowhere does Morton mention or even suggest varying the repetition length in such a manner, and the remaining cited references fail to remedy this missing feature. For this and other reasons it is submitted that claim 39 is allowable over the references of record.

It should be understood that the above remarks are not intended to provide an exhaustive basis for patentability or concede the basis for the rejections in the Office Action, but are simply provided to overcome the rejections made in the Office Action in the most expedient fashion.

In view of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and an early notice of allowance is earnestly solicited. If after reviewing this amendment the Examiner feels that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the applicant's undersigned representative by telephone to resolve such issues.

Respectfully submitted,

By _____

Charles P. Schmal, Reg. No. 45,082
Woodard, Emhardt, Moriarty, McNett & Henry LLP
Bank One Center/Tower
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
(317) 634-3456